

REMARKS

This paper is responsive to the Office Action mailed July 19, 2006. Claims 1-11, 13-22, 26, 27 and 30-32 are currently pending in the above-identified application. Claims 1, 2, 5-9, 13, 14, 16-22, 26, 27 and 30-32 have been amended. Support for all amended claims can be found in the specification, and no new matter has been added by these amendments. Reconsideration of the claims in view of the amendments and the following remarks is respectfully requested.

Examiner Interview

Applicants thank the Examiner for his time on November 28, 2006 to discuss the proposed claim amendments and clarification of certain differences between the proposed claims and the cited prior art references.

Claim Rejections under 35 U.S.C. § 103

Claims 1-11, 13-22, 26, 27 and 30-32 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,397,307 issued to *Ohran* in view of U.S. Patent No. 5,544,347 issued to *Yanai* and further in view of U.S. Patent No. 6,742,116 issued to *Matsui*. Applicants respectfully traverse the rejection.

The claimed invention relates to data transfer between a local disk system and a remote disk system. A user may select whether or not the data transferred in encrypted form is to be stored in the encrypted form or in decrypted form. The claimed invention also permits a user to change the encryption/decryption key via a management console without stopping the I/O operation from the host computer and further avoids mis-decryption of the data at the remote disk system, i.e., by using an inappropriate key (see specification, page 6:22 to page 7:9).

Claim 1, as amended, recites in part "in the local disk system coupled to a first host computer and a management console, the local disk system having first and second volumes of storage, the first and second volumes being associated with first and second encryption keys, respectively, the first and second encryption keys being provided to the local disk system by the management console."

Ohran discloses a method and system for mirroring and archiving mass storage. Encryption keys are dynamically generated by the primary system and the secondary system, as opposed to selecting keys from a predetermined set (see, col. 11:22-25). The generated keys are used to encrypt and decrypt some or all of the information transferred between the systems without sharing the encryption key (see, col. 11:40-43).

Yanai discloses a data storage system that mirrors data on a remote data storage device. Data is copied from a primary data storage system to a physically remote secondary data storage system that is transparent to a user. The system operates in real-time mode and point-in-time mode. In real-time mode, data is stored in two physically separate data storage units before I/O completion. In point-in-time mode, data is copied to a remote storage system asynchronously from the time when the local storage system returns an I/O completion signal to a host (see, col. 6:16-32).

Matsui discloses common key tables associated with a security program. The keys are generated based on time intervals or events (see, col. 11:5-14).

Neither *Ohran*, *Yanai*, *Matsui* or any combination thereof disclose the elements of claim 1. Specifically, none of the cited references disclose, "the first and second encryption keys being provided by the management console." Thus, claim 1 is allowable.

Independent claims 2, 9, 13, 16, 17, 26, 27, 30 and 32 have been amended to include a management console that provides an encryption key. For example, claims 2, 17, 26, and 30, as amended, recite in part, "the first and second encryption keys being provided to the local disk system by the management console." Claims 9 and 13, as amended, recite in part, "providing an encryption key to the local disk system, the encryption key being provided by a management console coupled to the local disk system." Claims 16, 27 and 32 have been similarly amended. Thus, claims 2, 9, 13, 16, 17, 26, 27, 30 and 32 are allowable.

Claims 3-8, 10, 11, 14, 15, 18-22 and 31 depend from one of the independent claims discussed above and are allowable at least for the same reasons.

Application No. 09/618,202
KENJI YAMAGAMI
Reply to Office Action of July 19, 2006

PATENT

CONCLUSION


In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,

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Date



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